

Applicant : Patrizio Vinciarelli et al.  
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Amendments to the claims (this listing replaces all prior versions):

1-12. (cancelled)

13. (currently amended) Apparatus comprising power converter circuitry having first circuitry encapsulated to form a first discrete physical unit and connected to respond to control information received from second circuitry encapsulated ~~[[in]]~~ to form a second discrete physical unit, the two physical units respectively including subparts of a device for conveying said control information via a galvanically isolated electromagnetic path.

14-31. (cancelled)

32. (previously presented) The apparatus of claim 13 further comprising:

primary-side circuitry mounted on a primary-side substrate and including a primary-side communicator for sending or receiving said control information used in controlling the power conversion, and

secondary-side circuitry mounted on a secondary-side substrate and including a secondary-side communicator for sending or receiving said control information.

33. (previously presented) The apparatus of claim 32 wherein

said primary-side circuitry includes low power primary-side components mounted on a low-power side of said primary-side substrate, and heat dissipating primary-side components mounted on a heat dissipation side of said primary-side substrate,

said secondary-side circuitry includes low power secondary-side components mounted on a low power side of said secondary-side substrate, and

said low-power sides of said primary-side and secondary-side substrates generally face one another to define an inner space between them with the low power components in the inner space.

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34. (previously presented) The apparatus of claim 32 wherein said primary-side and secondary-side substrates are held parallel.

35. (previously presented) The apparatus of claim 32 wherein the primary-side and secondary-side substrates define an edge of the power converter circuitry and further comprising conductive terminations along the edge for mounting the power converter circuitry on a circuit board.

36. (previously presented) The apparatus of claim 32 wherein the primary-side and secondary-side substrates are mechanically separable from one another, galvanically isolated from one another, and configured to be placed in positions relative to one another to enable said primary-side and secondary-side communicators to cooperate to pass said control information.

37. (previously presented) The apparatus of claim 32 wherein said primary-side circuitry includes a primary winding of a transformer and said secondary-side circuitry includes a secondary winding of said transformer said windings being galvanically isolated.

38. (previously presented) The apparatus of claim 32 wherein said communicators comprise windings and said control information is passed by electromagnetic coupling between said windings.

39. (previously presented) The apparatus of claim 38 wherein said coupling is achieved without a permeable core linking said windings.

40-41. (cancelled)

42. (previously presented) The apparatus of claim 32 wherein at least one of said primary-side and secondary-side circuitries includes a heat dissipating component mounted on a heat dissipation side of the corresponding substrate.

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43. (previously presented) The apparatus of claim 42 wherein each of the primary-side and secondary-side substrates are mounted with the heat dissipation side generally facing away from the other substrate.

44. (previously presented) The apparatus of claim 32 wherein the first circuitry comprises the primary-side circuitry, the first discrete physical unit comprises the primary-side substrate, the second circuitry comprises the secondary-side circuitry, and the second discrete physical unit comprises the secondary-side substrate.

45. (previously presented) The apparatus of claim 32 wherein the second circuitry comprises the primary-side circuitry, the second discrete physical unit comprises the primary-side substrate, the first circuitry comprises the secondary-side circuitry, and the first discrete physical unit comprises the secondary-side substrate.

46. (previously presented) The apparatus of claim 32 wherein the second circuitry is configured and adapted to electronically modulate a carrier signal with said control information, and  
the first circuitry is configured and adapted to generate an electrical signal corresponding to said control information in response to a signal delivered by said second circuitry.

47. (previously presented) The apparatus of claim 32 wherein the second circuitry is configured and adapted to electronically modulate a high frequency carrier signal with said control information, and,  
the first circuitry is configured and adapted to generate an electrical signal corresponding to said control information in response to a signal delivered by said second circuitry.